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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,722	07/06/2000	Suresh Krishna	BRCMP005	5437
28393	7590	04/25/2006	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C. 1100 NEW YORK AVE., N.W. WASHINGTON, DC 20005			COLIN, CARL G	
			ART UNIT	PAPER NUMBER
			2136	

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/610,722	Applicant(s) KRISHNA ET AL.	
	Examiner Carl Colin	Art Unit 2136	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 46-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 46-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                               | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>see att</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. In response to communications filed on 2/6/2006, applicant has amended independent claims 46 and 64. The following claims 46-70 are presented for examination.

1.1 Applicant's arguments, filed on 2/6/2006, with respect to the rejection of claims 46-70 have been fully considered, but they are not persuasive. Applicant has amended the independent claims to recite to replace cryptographic functions with encryption and decryption functions and argues that Leung does not describe encryption or decryption at a home agent or server. Examiner respectfully disagrees. Examiner asserts that the cryptographic functions described in Leung such as hashing or message digest authentication using cryptographic keys includes encryption/decryption operations (see column 3, lines 15-45 and column 3, line 45 through column 4, line 5). Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. Therefore, Leung discloses home agents performing encryption/decryption operations. Applicant has not overcome the rejection as explained above, therefore, claims 46-70 are still rejected in view of Leung.

***Information Disclosure Statement***

2. The information disclosure statement filed 2/6/2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because US Patent number 5,471,842 does not match with the publication date and the inventor name. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

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reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3.1 **Claims 46-70** are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,760,444 to **Leung**.

3.2 **As per claims 46 and 64, Leung** discloses a server receiving a packet identifying a mobile node and obtaining security association from a security association table, the server is configured to construct the packet and includes security association and provides at least a portion of the security association to at least one of a plurality of Home Agents (processing engines) that perform authentication and cryptographic operations that meets the recitation of receiving at least a portion of a header for each data packet in a plurality of data packets (see column 7, lines 33-50 and column 2, line 57 through column 3, line 15) and a classification module that determines security association information associated with each data packet in a plurality of data packets, for example (see column 7, lines 33-50); wherein the classification module is configured to provide at least a portion of the security information associated with the packets to a plurality of security processing engines, for example (see column 7, lines 33-50; column 6, lines 7-46; column 4, lines 32-62; and claims 1-3) that perform authentication and cryptographic operations. **Leung** further discloses home agents performing hashing or message digest authentication using cryptographic keys that include encryption/decryption operations (see column 3, lines 15-45 and column 3, line 45 through column 4, line 5). (see column 3, lines 15-45). As described above, Leung discloses plurality of processing engines are configured to

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process plurality of data packets in parallel; in another embodiment, **Leung** discloses Home agent or server performing the determining step and servers performing authentication and cryptographic operations (column 8, line 36 through column 9, line 15 and column 7, lines 15-21) that also meets the recitation of wherein the plurality of processing engines are configured to process plurality of data packets in parallel.

**As per claims 47-48, Leung** discloses the limitation of further comprising a database including security association information wherein the database is local to the classification module, and wherein the database includes one or more entries wherein each entry defines information associated with one security association, for example (see column 3, line 45 through column 4, line 31 and column 6, lines 7-32).

**As per claim 49, Leung** discloses the limitation of wherein the database is located on the same chip as the classification module, for example (see column 9, lines 21-52).

**As per claim 50, Leung** discloses the limitation of wherein the security association information includes a sequence number an anti-replay window and a lifetime of the security association, for example (see column 3, line 45 through column 4, line 5).

**As per claim 51, Leung** discloses the limitation of wherein the security association information further includes an encapsulating security payload (ESP) encryption algorithm

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identifier and one or more ESP encryption keys, for example (see column 3, line 45 through column 4, line 5).

**As per claims 52-53, Leung** discloses the limitation of wherein the security association information further includes an (ESP) authentication algorithm identifier and one or more ESP authentication keys and an authentication header (AH) authentication algorithm identifier and one or more AH authentication keys, for example (see column 3, line 1 through column 4, line 5).

**As per claim 54, Leung** discloses the limitation of wherein the security association information includes protocol information, for example (see column 2).

**Claims 55-63** recite the same inventive concept as claims 46 and 47 except for using different memory and having the system embodied in different communication device such as router, firewall, etc. These modifications do not depart from the spirit and scope of the invention disclosed by **Leung**, for example (see column 10, lines 55-63). See also column 4, lines 5-62; column 6, lines 18-55; and column 9; for different memory and system embodiment).

**As per claims 65-67, Leung** discloses the limitation of wherein the step of determining security association information comprises accessing a database to determine security association information and further comprises using one or more selectors to identify a security association information entry in the database wherein the one or more selectors include at least one of a

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destination IP address, a security protocol identifier and a security protocol identifier and a security parameter index, for example (see columns 3 and 7).

**As per claims 68-69, Leung** discloses the limitation of wherein one or more selectors the step of determining security association information comprises accessing a database to determine security association information and further comprises using one or more selectors include at least one of a destination IP address, a source IP address and a transport layer protocol; and discloses the limitation of wherein one or more selectors further include a source port and a destination port, for example (see column 3, column 8, lines 1-14; lines 50 et seq.; column 9, line 52 through column 10, line 40).

**As per claim 70, Leung** discloses updating or generating new security association in the server and discloses a database in the server to store security association information for the Home Agent that meets the recitation of wherein the step of determining security association information comprises if no security association information exists in the database associated with the packet, generating the security association information and storing the security association information in an entry in the database, for example (see column 7, line 50 through column 8, line 40).

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4.1 The prior art made of record and not relied upon is considered pertinent to applicant's disclosure as the art discloses efficient classification of packets.

US Patent Application Publication: US 2003/0005144 Engel et al.

US Patents: 6,226,710 Melchior; 6,751,728 Gunter et al.

The following prior art: US Patents: 5,867,706 Martin et al; 6,189,100 Barr et al admitted by Applicant from Applicant's disclosure disclose many of the claimed features such as plurality of processing engines performing operations in parallel and cryptographic functions including encryption and decryption.

4.2 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl Colin whose telephone number is 571-272-3862. The examiner can normally be reached on Monday through Thursday, 8:00-6:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Carl Colin

Patent Examiner

April 19, 2006

CHRISTOPHER REVAK  
PRIMARY EXAMINER

cel 4/24/06